Ruizhi Pu

Tel: +1 347-322-8414 E-mail: rup11@pitt.edu

EDUCATION

Nanjing University of Posts and Telecommunications (NUPT) 09/2013-07/2017

Major: Communication Engineering **Degree:** Bachelor of Engineering (expected)

GPA:3.2/4 **Ranking**: 45/320

Main Course: C/C++ programming; Signal and System; Digital signal processing; Principle of Communication; Advanced Mathematics; Micro-computer; Computer Networks

University of Pittsburgh(Pitt) 08/2017-Present

Major: Information science **Degree:** Master of Science (expected)

GPA:3.66/4 **Track:** Big data analytic

Main Course: Data structure, Data mining, Data analytics, Database management, Introduction to neural network, Cloud Computing, Algorithm design, Information visualization

SCHOLARSHIPS & AWARDS

2nd Prize of RoboCup China Open 10/2015

1st Prize of RoboCup China Open and Jiangsu Open 10/2014

3rd Prize of RoboCup Iran International Open 04/2014

ORGNIZATION EXPERIENCE

-Leader of UAV group in University of HongKong(HKU)

-President of Robert Lab in NJUPT(Province-level Lab)

Research EXPERIENCE

1. A Research on Improvement of Precision about Human Action Recognition based on Kinect. Supervised by Professor Liang Zhou(NJUPT)

-Human-computer Interaction Design. Using Kinect to capture the image of people and process the raw data with Feature standardization. And using different algorithm to analyze the RGB image.

-Optimized the algorithm by adjusting parameters and comparing predicted model (from Kalman Filtering algorithm) with real motion model. Eliminated the impact of uncertainty and randomness of human action to predict by applying fuzzy mathematics calculation model.

2. A Team Project about Implementing High Efficiency Robots in Fire Rescue Simulation Supervised by Professor Zhiwei Liang(NJUPT)

-Applied K-means and Convex Hull algorithm to optimize the firefighting strategy based on the fire spreading trend, enhancing 50% of the intelligentize level of the robots.

-Improved the rescue efficiency of the robots up to 80% by applying greedy algorithm to find the Top k path in the fire scene.

-Integrated and enhanced the communication algorithms, and optimized it to enhance the communication throughput up to 100% and reduce the packet loss rate from 90% to 5%

3. A Project on Kaggle to predict the survivor of the TITANIC

Supervised by Professor Marek Druzdzel(Pitt)

-Using Machine learning algorithms(RandomForest Regression, SVM, KNN) for prediction.

-Using Data visualization package of python to visualize the data and find their inner connection

-15% top of the whole ranking list

4. A project on Event-detection clustering

Supervised by Professor Yuru Lin(Pitt)

-Analyzed the algorithms from the paper and collected the related information

-Used R to rebuild the analyzing system and implement the algorithms from the paper

-Improved the algorithm by changing data structure and using new deep learning algorithms

-Compared the different results from the different algorithms and form a paper to explain the reasons

5. A research on Unmanned Arial Vehicle(UAV) development

Supervised by Professor Amy Wang(THU) and Heming Cui(HKU)

-Designed algorithm for UAV(Dji) path plan and object detection

-Collected environment data from the environment and used the data for 3D scenario rebuilding

-Built the low cost ad-hoc communication system based on MAVlink for the UAV clusters

-Built large Neuron Network for data analysis

6. A project on Lung Cancer prediction on Kaggle

-Analyzed data using different visualization tools(R), found out the distribution of data

-Built CNN networks to form a prediction model for picture

-Read CNN relevant papers through CVPR and change the CNN to R-CNN

COMPUTER SKILLS

Java, Python, R, Matlab, C/C++, also familiar with Hadoop/Spark, Tensorflow

Intern experience

Research Assistant(RA) in CS department, University of HongKong (HKU) 06/2018-08/2018